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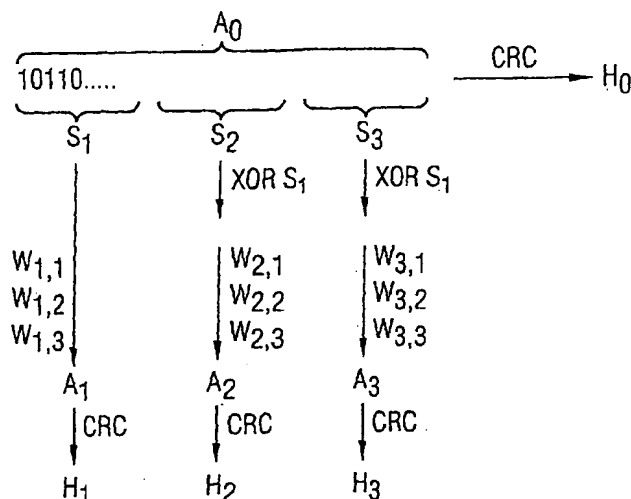
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(54) Title: ASSOCIATING MAC ADDRESSES WITH ADDRESSES IN A LOOK-UP TABLE



(57) **Abstract:** An ethernet switch associates addresses in a look-up table with received MAC addresses using a CRC algorithm, so that correspondence data about each MAC address can be stored in the corresponding section of the look-up table. When, as the look-up table is constructed, a given MAC address A_0 hashes to an address H_0 which is already associated with a previous MAC address, the MAC address is re-hashed using Walsh codes $W_{1,m}$ to provide a different look-up table address H_1 . This procedure can be performed any number of times y to generate different addresses H_n for $n=1, \dots, y$. If it is performed sufficiently frequently, then it is likely that an address will be found which is free. In this way, the number of MAC addresses which will typically be associated with a single look-up table address is reduced, preferably to only one.

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